No. 200800081

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

NexGen Turf Research, LLC

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, TALL

'Brockton'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fourteenth day of November, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
NexGen Turf Research, LLC

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
ATF1167

3. VARIETY NAME
'Brockton' (bt:10/23/08)

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
33725 Columbus Street S.E.
Albany, Oregon 97322
U.S.A.

5. TELEPHONE *(include area code)*
(541) 967-8923

6. FAX *(include area code)*
(541) 967-8223

FOR OFFICIAL USE ONLY

PVPO NUMBER
#200800081

FILING DATE
1/31/2008

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
OR

9. DATE OF INCORPORATION
July 31, 2006

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*
Kenneth Hignight
c/o NexGen Seed Research
33725 Columbus Street S.E.
Albany, Oregon 97322
U.S.A.

FEES RECEIVED

FILING AND EXAMINATION FEES:
$4,382.00
DATE 1/30/2008

CERTIFICATION FEE:
$ 768.00
DATE 10/23/2008

11. TELEPHONE (Include area code)
(541) 967-8923

12. FAX (Include area code)
(541) 967-8223

13. E-MAIL

14. CROP KIND *(Common Name)*
Tall Fescue

16. FAMILY NAME *(Botanical)*
Poaceae

15. GENUS AND SPECIES NAME OF CROP
Festuca arundinacea

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? **(*OPTIONAL*)**
☐ YES ☑ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED
(Follow instructions on reverse)

a. ☑ Exhibit A. Origin and Breeding History of the Variety
b. ☑ Exhibit B. Statement of Distinctness
c. ☑ Exhibit C. Objective Description of Variety
d. ☑ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☑ Exhibit F. Declaration Regarding Deposit
g. ☑ Voucher Sample *(3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☑ Filing and Examination Fee ($4,382), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(If "yes", answer items 21 and 22 below)* ☑ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☑ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER		SIGNATURE OF OWNER	
Kenneth Hignight			
NAME *(Please print or type)*		NAME *(Please print or type)*	
Kenneth Hignight			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director of Research	1-17-08		

(See reverse for instructions and information collection burden statement)

ST-470 (02-06) designed by the Plant Variety Protection Office using Word 2003.

Exhibit A:

Origin and Breeding History

'Brockton' <ATF1167> Tall Fescue
(BT:10/3/08)

1. The tall fescue (*Festuca arundinacea*) cultivar 'Brockton' <ATF1167> (BT:10/3/08) traces its parentage to the released cultivar Penn 1901. A plant selection field containing 2,500 plants of Penn 1901 was planted in the fall of 1996. In the spring/summer of 1997 the 2,500 plants were infected by stem rust incited by *Puccinia graminis*. The single plants were then rated for degree of infection. The plant selection field was flailed in early summer and the plants were rated for recovery, genetic color and crown density. One hundred plants were then selected and moved together in isolation. Following harvest in1998 a plant selection field was established containing 1,207 plants. In the spring of 1999 the single plants were rated for dark genetic color, crown density, number of inflorescence, level of endophyte infection (*Neotyphodium coenophialum*) and degree of stem rust (*Puccinia graminis*). Forty-two clones were selected and moved to isolation blocks in the spring before anthesis. The 42 clones were harvested in bulk. In the fall of 1999, a single spaced-plant nursery was established containing 2, 200 plants. The single plants were rated for dark genetic color, crown density, number of inflorescence, level of endophyte infection (*Neotyphodium coenophialum*) and degree of stem rust (*Puccinia graminis*). Fifty clones were selected and moved to an isolation block in the spring before anthesis. The 50 clones were harvested in bulk. In 2001 plants were established in rooting tubes.

Drought resistance has been associated with deeper root penetration for a number of turfgrass species (Burton et al., 1954; Carrow 1996). A greenhouse screening technique was developed using flexible root tubes to evaluate root extension and root length densities (Bonos et al., 2004). Clear polyethylene tubing was filled with silica sand grade No. 8 mixed evenly with 1.0 g of Scotts micro-nutrients, 2.0 g of Scotts starter fertilizer, and 4.0 g of Scotts Ploy S. The flexible tube was inserted inside a

PVC pipe cut to 63.5 cm, maintained at a 30 degree angle. The plants were irrigated by a drip system. Each tube was equipped with a drip emitter and received 5.9 mL of water during each irrigation cycle. The greenhouse was maintained at 25 degree C. Supplemental lighting with high pressure sodium lamps was used to maintain 12 hours of light.

One-hundred sixty-eight tubes represent a replication. This test contained three replications for a total of 504 plants. The plants were clipped six times beginning March 22, 2001 and ending April 24, 2001. The roots were harvested on April 25, 2001. The lower one foot of the flexible tube is cut and the roots are washed from the silica sand, dried and weighed. In the first replication the selection criteria was clipping average less than 0.28 g and root weight greater than 0.40 g. Six plants were selected. The second replication the selection criteria was clipping average less than 0.23 g and root weight greater than 0.50 g. Eight plants were selected. The third replication the selection criteria was clipping average less than 0.29 g and root weight greater than 0.54 g. Seven plants were selected.

The 21 plants were moved to an isolated crossing block and harvested in bulk in 2002. The population was then planted in a single spaced plant nursery in the fall of 2002. The population was replicated three times with 500 plants per replication, for a total of 1500 plants. The plants were evaluated for genetic color, freedom from disease, heading date and crown density. In the spring of 2003, 29 plants were selected and moved before flowering to an isolated crossing block. The seed was harvested in bulk and planted in a 2003 turf trial near Salem, NJ.

The turf trial was evaluated for performance and disease through the summer of 2004. 'Brockton' ATF1167 performed well in the trial. A 1500 single plant increase block was established in the fall. In the summer of 2005, the block was harvested in bulk and designated ATF1167, breeder seed.

(LE:10/3/08)

References:

1. Burton. G.W., E. H. DeVane, and R. L. Carter. 1954. Root penetration distribution and activity in southern grasses measured by yields, drought symptoms, and P32 uptake. Agron. J. 46:229-233.

2. Carrow, R. N. 1996. Drought avoidance of diverse tall fescue cultivar. Crop Sci. 36:371-377.

3. Bonos, S.A., W. A. Meyer, D. Rush, K. Hignight. 2004. Selection for deep root production in tall fescue and perennial ryegrass. Crop Sci. 44:1770-1775.

2. Breeder Seed Maintenance:

A breeder seed multiplication was planted in isolation in 2004 in Albany, Oregon. Seed was harvested in bulk in 2005 and is maintained in cold storage. Seed propagation is limited to three generations, one each of foundation, registered, and certified.

3. Stability and Uniformity:

'Brockton'
ATF1167 has been a stable uniform cultivar over two generations. No off-type or (bt:10/3/'08)
variant plants have been observed during the multiplication or reproduction. Turf
plots of ATF1167 have been uniform and stable.
(bt:3/10/'08)

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Exhibit B:

Novelty Statement of ATF1167* Tall Fescue

The following summary outlines the distinctive characteristics of 'Brockton' <ATF1167>. The novelty of ATF1167 is based on the unique combination of these characteristics. ATF1167 is most similar to Rebel II, but may be differentiated by using the following criteria:

1) The genetic color of ATF1167 is significantly darker compared to Rebel II (tables 1A, 1B).
2) ATF1167 has a shorter mature plant height than Rebel II (tables 1A, 1B).
3) The panicle length of ATF1167 is shorter compared to Rebel II (tables 1A, 1B).
4) The flag leaf characteristics length, sheath length and internode length are all shorter for ATF1167 compared to Rebel II (tables 1A, 1B).
5) The leaf blade characteristics length and sheath length are all reduced for ATF1167 compared to Rebel II (tables 1A, 1B).
6) The length of the panicle from the lower most whorl to the tip is reduced for ATF1167 compared to Rebel II (tables 2A, 2B, illus. 1).

*<ATF1167> = 'Brockton'
(BT: 5/29/08)

Exhibit C

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVIC
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
TALL & MEADOW FESCUES(*Festuca* spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME
NexGen Turf Research, LLC	ATF1167	"Brockton" (bt:10/3/08)

ADDRESS (*Street and No., or RD No., City, State, ZIP Code, and Country*)

33725 Columbus ST S.E.
Albany, OR, USA
97322

FOR OFFICIAL USE ONLY

PVPO NUMBER #200800081

PLEASE READ ALL INSTRUCTIONS CAREFULLY:

Place the appropriate number that describes the varietal characteristics of this variety in the boxes below. Use leading zeroes when necessary (e.g. 089 or 09) when number is wither 99 or less or 9 or less. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Give additional description for all characteristics that cannot be adequately described in the form below. Cultural conditions must be stated in the comment section and plant number/data points shown in all tables

1. SPECIES: (With comparison varieties, use varieties within the species of the application variety)

__6__ 1 = *F. arundinacea* (Tall)

Turf Types

1 = Kentucky 31	2 = Rebel	3 = Olympic	4 = Bonanza	5 = Arid	6 = Rebel II
7 = Shortstop	8 = Silverado	9 = Rebel Jr.	10 = Mini Mustang	11 = Crewcut	12 = Bonsai

Forage Types

20 = Kentucky 31	21 = Martin	22 = Forager	23 = Mozark	
24 = Kenhy	25 = AU Triumph	26 = Fawn	27 = Cajun	

_____ 2 = *F. pratensis* (Meadow)

30 = Admira	31 = Beaumont	32 = Comtessa	33 = Ensign	34 = Trader

2. CYTOLOGY:

__2N=42___ Chromosome Number

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)

__0__Transition Zone __2__West __2__ Northeast _____ Other (Specify):_____

4. MATURITY: (Date First Headed, 10% of Panicle Emergence)

_5___ Maturity Class 1 = Very early ( ) 2 = AU Triumph 3 = Early (Fawn,) 4 = Kenhy 5 = Medium (Rebel)

6 = Bonanza 7 = Late (Silverado) 8 = Very late

Date Headed _35.67 Days after April 1_____ Location ___Albany, Oregon_____

Avg. No. days to heading_____

4. MATURITY: (continued)

#200800081

_____ Days earlier than _____
Maturity same as __6__
_____Days later than _____
} Comparison Variety

5. MATURE PLANT HEIGHT cm: (Average of 100 culms from crown to top of panicle, if panicle is nodding, straighten)

__90.80__ cm Height

__20.20__ cm Shorter than _6_
Height same as ___
__ __.__ cm Taller than ___
} Comparison Variety

INTERNODE LENGTH CM:
(First internode subtending the flag leaf)

__14.40__ cm InternodeLength

__5.23__ cm Shorter than _6_
Length same as ___
__ __.__ cm Longer than ___
} Comparison Variety

HEIGHT AT EAR EMERGENCE cm: (Flag leaf height from crown to flag leaf node)

__41.10__ cm Height

__15.40__ cm Shorter than _6_
Height same as ___
__ __.__ cm Taller than ___
} Comparison Variety

6. GROWTH HABIT: (Mature Plants)

_9_ 6 = Prostrate ( ) 3 = Semiprostrate (6) 5 = Horizontal ( )
7 = Semierect (Rebel) 9 = Erect (Mini Mustang)

7. RHIZOMES: (Psuedo):

__ __.__ mm Length _6_1 = Absent ( ) 2 = Rare (Rebel) 3 = Common ( )

8. LEAF BLADE: (Tiller leaves/ turf color)

*_7_ Color: 1 = Light green ( ) 3 = Medium light green ( ) 5 = Green ( )
7 = Medium dark green ( ) 9 = Very dark green ( )

__4___ Specify Rating of Comparison Variety

_1_ Anthocyanin: 1 = Absent (6) 9 = Present ( )

_1_ Basal Hairs: 1 = Absent (6) 9 = Present ( )

_7_ Margins: 1 = Smooth (6) 5 = Semi-rough ( ) 9 = Rough ( )

_6_Width Class: 1 = Very coarse ( ) 3 = Coarse (6) 5 = Medium ( )
7 = Fine ( ) 9 = Very Fine ( )

TILLER LEAF LENGTH CM: (First leaf subtending the flag leaf)

__33.80__ cm Tiller Leaf Length

__ 6.73_ cm Shorter than _6_
Length same as ___
__ __.__ cm Taller than ___
} Comparison Variety

TILLER LEAF WIDTH MM:

__9.67__ mm Tiller Leaf Width

_____ mm Narrower than ___
Width same as _6_
__.__ mm Longer than ___
} Comparison Variety

8. LEAF BLADE: (Continued)

#200800081

FLAG LEAF LENGTH CM:

_39.17_ cm Flag Leaf Length

_8.86_ cm Shorter than _6_

Length same as ___

__.__ cm Longer than ___

} Comparison Variety

FLAG LEAF WIDTH MM:

_7.33_ mm Flag Leaf Width

__.__ mm Narrower than ___

Width same as _6_

__.__ mm Wider than ___

} Comparison Variety

9. LEAF SHEATH: (Basal Portion)

__ Anthocyanin (seedling): 1 = Absent (KY-31) 9 = Present ( )

_9_ Auricle Hairiness: 1 = Absent ( ) 9 = Present (6) 97% See table 4

10. PANICLE: (At seed maturity except where noted.)

_7_ Shape: 1 = Narrow-tapering ( ) 5 = Ovate ( ) 7 = Oblong ( ) 9 = Other (specify)

_5_ Type: 1 = Compact (appressed) 5 = Intermediate ( ) 7 = Open ( ) 9 = Other (specify)

_9_ Orientation: 1 = Nodding (9 = Erect ( )

_1_ Branch Pubescence: 1 = Glabrous (6) 9 = Pubescent ( )

_1_ Anther Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6= Other (Specify)

_1_ Glume Color (At anthesis): 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6= Other (Specify)

_72.03_ cm Panicle Length (from base to tip, if nodding, straighten; after anthesis)

11.39 cm Shorter than _6_

Length same as ___

__.__ cm Longer than ___

} Comparison Variety

11. SEED: (With Lemma & Pelea)

* _2877__ mg per 1000 seeds

_____ mg Less than ___

Weight same as ___

_443__ mg More than _6_

} Comparison Variety

PALEA: (Keels or Margins) _3_ Hairs: 1 = Absent ( ) 5 = Short (Missouri 96) 9 = Long ( )

LEMMA: _1_ Hairs: 1 = Absent (Kenhy) 5 = Several ( ) 9 = Many (Missouri 96)

_6.53_ mm Lemma Length (Mature)

___ mm Shorter than ___

Length same as _6_

__.__ mm Longer than ___

} Comparison Variety

_1.20_ mm Lemma Width

__.__ mm Narrower than ___

Width same as _6_

__.__ mm Wider than ___

} Comparison Variety

11. SEED: (continued) #200800081

AWNS: _9_ AWNS: 1 = Absent ( ) 9 = Present (Falcon) _100_% Plants with awns

_1.27_ mm Awn length (Of those present.)

__.__ mm Shorter than ___
Length same as _6_ } Comparison Variety
__.__ mm Longer than ___

12. DISEASE, INSECT, AND NEMATODE REACTION: (0= Not Tested 1= Least Resistant 9= Most Resistant)

_0_ Melting-out (*Drechslera poae*)
_0_ Leaf Spot (*D. siccans*)
_0_ Net Blotch (*D. dictyoides*)
_0_ Brown Patch (*Rhizoctonia solani*)
_0_ C. Leaf Spot (*Cercospora fectucae*)
_0_ Pink Snow Mold (*Gerlachia nivalis*)
_0_ Silver Top (*F. tricinctum, F. roseum*)
___ Other Disease _____
___ Other Insect _____
___ Other Nematode _____

_0_ Blind Seed (*Gloeotinia temulenta*)
_0_ Dollar Spot (*Lanzia, Mollerdiscus* spp.)
_0_ Stem Rust (*Puccinia gramminis*)
_0_ T. Blight (*Typhula incarnate*)
_0_ Pythium Blight (*Pythium* spp.)
_0_ Powdery Mildew (*Erysiphe gramminis*)
_0_ Crown Rust (*Puccinia coronata*)

13. ENVIRONMENTAL STRESS:

_5_ Drought Stress	1 = Susceptible ( )	5 = Tolerant (6)	9 = Resistant ( )
_5_ Shade Stress	1 = Susceptible ( )	5 = Tolerant (6)	9 = Resistant ( )
_5_ Winter Stress	1 = Susceptible ( )	5 = Tolerant (6)	9 = Resistant ( )

14. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics, indicate the degree of resemblance with the following scale:

1 = Application variety is less than comparison variety. 2 = Same as 3 = More than, Better, Greater, Darker, etc.

Character	Varieties	Rating	Character	Varieties	Rating
Leaf Width	REBEL II	1	Leaf Color	REBEL II	3
Panicle Color	REBEL II	2	Panicle Shape	REBEL II	2
Seed Size	REBEL II	1	Cold Injury	REBEL II	3
Winter Color	REBEL II	3	Heat	REBEL II	3
Disease	REBEL II	3			

15. EXPERIMENTAL: Give a brief summary of the experimental design utilized to collect the data used on this form. Cultural conditions, number of plants measured and plant spacing must be specified.

A morphological nursery designated 05PVPFA1 was established in September of 2005, in Albany, Oregon. Experimental design consisted of 9 entries; 3 replications per entry; 20 plants per replication; for a total of 60 plants per entry. Crewcut, Rebel II, and KY-31were used as standards. Plants were established on 2.5 foot centers with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 2006 and 2007. The fertilizer source was 15-15-15 and was applied as a split application with ½ applied in the spring and ½ in the fall. The nursery was sprayed twice each spring, 3 weeks between applications, with Tilt (2 oz/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed.

16. **ADDITIONAL DESCRIPTION:** (Use additional sheets as required).
Describe all characteristics that cannot be adequately described in the form above in Exhibit D. Varieties used for comparison should be used as may be appropriate, such as for disease reactions. Append all comparative trial and evaluation data, including measured characters, environmental, and disease tests results. Providing such information may aid in conducting a more thorough review of the applicants claims of distinctness.

#200800081

Exhibit D:

Additional Description
'Brockton'
<ATF1167> **Tall Fescue**
(Lt:10/3/08)

'Brockton'
<ATF1167> is an improved turf-type tall fescue. It has a shorter mature plant height (tables 1A, 1B) than previously released tall fescue cultivars, such as KY-31 and Rebel II. ATF1167 has a medium maturity with an anthesis date earlier than Crewcut (tables 1A, 1B). ATF1167 exhibits a darker genetic color compared to KY-31 and Rebel II (tables 1A, 1B). The panicle length of ATF1167 is shorter compared to KY-31 and Rebel II (tables 1A, 1B). The flag leaf characteristics; length, sheath length and internode length are all shorter for ATF1167 than KY-31 and Rebel II (tables 1A, 1B). The flag leaf height, and internode length of ATF1167 is reduced compared to Crewcut (tables 1A, 1B). The leaf blade characteristics of blade length and height are shorter for ATF1167 than KY-31, Rebel II and Crewcut (tables 1A, 1B). ATF1167 has a shorter panicle length from the lower most whorl to the tip, compared to KY-31, Rebel II, and Crewcut (tables 2A, 2B). The whorl characteristic, length of longest branch is shorter for ATF1167 compared to KY-31 (tables 2A, 2B, illus. 1). The distance between the two most lower whorls is less for ATF1167 compared to Crewcut and KY-31 (tables 2A, 2B). The number of spikelets on the longest branch of the lower most whorl is greater for ATF1167 compared to Rebel II and KY-31 (tables 2A, 2B). ATF1167 has fewer plants with purple pigmentation in the panicles than Rebel II (tables 3A, 3B). ATF1167 has a more erect growth habit compared to KY-31 (tables 4A, 4B). The presence of only one branch on the lower whorl is more frequent in ATF1167 than KY-31 (tables 3A, 3B). The expression of two branches on the lower most whorl is less for ATF1167 compared to Rebel II and KY-31 (tables 3A, 3B). ATF1167 expresses fewer plants with dark pigmentation at the nodes compared to KY-31 and Rebel II (tables 4A, 4B). ATF1167 has a higher seed weight per 1,000 seeds compared to Rebel II and Crewcut, but less than KY-31 (tables 4A, 4B).

Table 1A — 2006 Morphological Data

Cultivar	Genetic Color (1-9 Scale 9=Best)	Heading Date (days after March 1)	Anthesis Date (days after April 1)	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
* ATF1167	6.00	35.67	55.33	90.80	24.03	72.03	39.17	7.33	41.10	24.53	14.40	33.80	9.67	16.83	13.23
CE3	6.00	30.67	54.33	95.20	24.00	75.87	36.37	6.00	42.67	23.57	14.40	30.07	8.33	17.30	12.47
RP1	6.33	34.00	56.33	89.03	23.50	69.10	33.47	5.33	42.37	22.20	15.23	28.37	8.00	17.17	12.03
ATF1203	7.00	37.33	58.67	88.63	22.93	70.07	37.70	6.67	42.50	24.03	13.87	32.97	10.00	17.50	13.07
Crewcut	6.00	38.33	60.67	97.37	24.13	73.00	39.07	6.67	48.07	24.40	18.07	36.57	9.67	20.13	14.10
Rebel II	4.67	35.33	59.33	111.00	24.87	83.43	48.03	7.33	56.50	29.90	19.63	40.53	10.33	23.33	16.50
KY-31	3.67	33.00	60.00	130.33	21.20	92.87	51.87	7.67	69.73	35.40	23.30	45.20	11.00	33.37	20.07
LSD (0.05)	0.58	1.72	1.82	5.75	3.56	4.92	2.38	1.12	3.55	2.08	1.44	1.93	0.65	2.01	0.87
CV	7.03	3.38	2.16	3.94	10.41	4.41	4.01	11.49	4.97	5.43	5.83	3.75	4.65	6.63	4.14

■ Cultivar under evaluation
■ Significant difference over two locations one year.
■ Significant difference over one location one year.
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

Table 1B — 2007 Morphological Data

Cultivar	Genetic Color (1-9 Scale 9=Best)	Heading Date (days after March 1)	Anthesis Date (days after April 1)	Mature Plant Height (cm)	Plant Width (cm)	Panicle Length (cm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Flag Leaf Internode Length (cm)	Leaf Blade Length (cm)	Leaf Blade Width (mm)	Leaf Blade Height (cm)	Leaf Sheath Length (cm)
ATF1167	6.33	53.67	56.00	120.37	28.43	85.90	44.23	6.00	61.13	27.63	24.67	40.37	7.33	25.10	15.97
CE3	6.33	50.00	54.67	113.03	28.80	78.40	42.30	5.00	59.63	25.17	23.47	37.83	5.67	25.90	15.00
RP1	6.00	53.67	54.67	111.13	28.43	77.57	39.77	5.33	59.70	25.47	24.33	34.77	5.33	24.50	14.77
ATF1203	6.33	55.00	57.33	122.07	28.83	85.13	44.47	6.00	64.57	28.27	24.90	40.97	7.00	28.03	16.73
Crewcut	5.67	58.00	59.00	125.40	30.23	86.47	44.57	6.00	66.67	27.10	26.93	44.10	7.33	29.50	17.03
Rebel II	4.33	55.00	57.33	134.83	30.13	92.70	53.20	6.67	74.57	32.90	28.73	50.10	7.67	31.97	20.03
KY-31	4.00	52.00	55.67	155.17	28.70	97.10	57.43	7.00	96.27	38.30	29.57	57.60	9.67	52.33	24.37
LSD (0.05)	0.66	1.61	1.44	5.64	2.16	5.57	3.45	0.86	3.87	1.61	1.41	3.65	0.87	3.28	1.08
CV	8.15	2.05	1.76	3.08	5.10	4.45	5.09	9.85	3.86	3.77	3.72	5.75	8.37	7.27	4.18

■ Cultivar under evaluation
■ Significant difference over two locations one year.
■ Significant difference over one location one year.
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

*<ATF1167>='Brockton' (BT: 10/3/2008)

#20080081

#20080081

Table 2A — 2006 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Length of Panicle from Lower Most Whorl to Tip (mm)	Spikelets per Panicle	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Branch Lower Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Branch Lower Whorl
* ATF1167	6.53	1.20	1.27	6.47	1.13	5.07	235.43	103.33	6.67	12.33	112.77	60.77	21.33
CE3	6.57	1.27	1.37	6.30	1.13	4.90	225.33	77.00	7.33	12.50	104.93	57.33	14.00
RP1	6.40	1.30	1.23	6.23	1.13	4.70	207.40	76.00	7.33	12.27	94.73	52.53	14.00
ATF1203	6.70	1.27	1.20	6.37	1.13	4.77	227.87	106.67	6.33	11.83	103.47	54.97	20.33
Crewcut	7.00	1.47	1.67	6.50	1.23	5.10	264.50	109.33	7.33	12.90	126.17	67.67	19.67
Rebel II	7.40	1.43	1.73	6.70	1.20	5.23	279.93	112.33	6.67	12.37	125.53	69.23	18.67
KY-31	7.80	1.40	1.30	7.43	1.27	5.63	324.87	120.33	8.00	14.07	138.57	80.40	17.00
LSD (0.05)	0.48	0.23	0.31	0.32	0.12	0.35	15.62	19.37	0.80	1.04	10.52	3.03	2.39
CV	4.74	11.92	15.34	3.34	6.78	4.77	4.26	13.21	7.74	5.66	6.28	3.29	9.20

■ Cultivar under evaluation
■ Significant difference over two locations one year.
■ Significant difference over one location one year.
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

Table 2B — 2007 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Palea Length (mm)	Palea Width (mm)	Glume Length (mm)	Length of Panicle from Lower Most Whorl to Tip (mm)	Spikelets per Panicle	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Branch Lower Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Branch Lower Whorl
ATF1167	6.43	1.27	1.27	6.53	1.17	5.13	279.73	109.00	5.67	10.83	113.50	72.03	19.00
CE3	6.07	1.27	1.27	6.47	1.23	4.90	250.63	80.00	5.67	11.23	93.07	60.30	12.67
RP1	6.33	1.27	1.07	6.27	1.13	4.80	233.60	77.00	5.33	10.80	91.30	56.90	12.67
ATF1203	6.47	1.30	1.33	6.63	1.23	5.17	284.70	104.00	5.33	10.93	112.53	69.30	19.00
Crewcut	6.53	1.20	1.37	6.77	1.27	5.20	299.33	95.00	6.33	12.07	125.70	77.43	18.00
Rebel II	6.80	1.30	1.40	7.03	1.23	5.07	306.97	106.67	6.00	11.90	119.70	75.57	16.67
KY-31	7.00	1.33	0.93	7.13	1.20	5.47	350.87	124.00	5.67	12.40	129.13	86.57	16.33
LSD (0.05)	0.54	0.16	0.43	0.33	0.17	0.32	17.31	7.96	0.71	0.87	12.65	4.97	1.60
CV	5.68	8.46	23.69	3.34	9.69	4.31	4.15	5.51	8.54	5.20	7.76	4.80	6.75

■ Cultivar under evaluation
■ Significant difference over two locations one year.
■ Significant difference over one location one year.
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

*<ATF1167>='Brockton'
(BT: 10/3/08)

Panicle Type Inflorescence

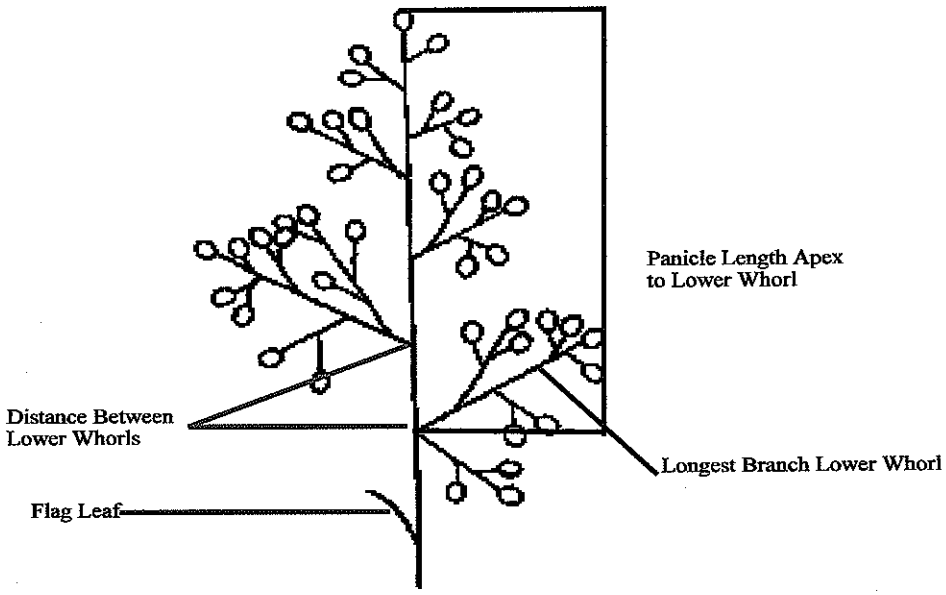

Illustration 1.

Table 3A 2006 Additional Morphological Measurements of the Panicle

Cultivar	Anther Color % Purple	Panicle Color % Purple	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape % Oblong	Panicle Shape % Ovate	Panicle Type % Compact	Panicle Type % Inter-mediate	Panicle Type % Open	Panicle Branch Lower Whorl No. branches=1	Panicle Branch Lower Whorl =2	Panicle Branch Lower Whorl >3	Panicle Branch Pubescence % Present
* ATF1167	2	8	100	2	5	0	92	8	0	92	8	15	77	8	0
CE3	2	2	100	3	12	10	85	5	10	85	5	12	80	8	5
RP1	10	7	100	0	7	12	83	5	12	83	5	17	76	7	0
ATF1203	5	10	100	3	5	6	82	12	6	82	12	27	60	13	0
Crewcut	5	10	100	3	5	0	83	17	0	83	17	7	86	7	0
Rebel II	3	32	100	3	23	2	13	85	2	13	85	12	88	0	5
KY-31	7	88	100	0	18	0	20	80	0	20	80	2	92	6	7

■ Cultivar under evaluation
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

Table 3B 2007 Additional Morphological Measurements of the Panicle

Cultivar	Anther Color % Purple	Panicle Color % Purple	Lemma Awn % Present	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape % Oblong	Panicle Shape % Ovate	Panicle Type % Compact	Panicle Type % Inter-mediate	Panicle Type % Open	Panicle Branch Lower Whorl No. branches=1	Panicle Branch Lower Whorl =2	Panicle Branch Lower Whorl >3	Panicle Branch Pubescence % Present
ATF1167	10	8	100	0	2	24	58	18	24	58	18	18	63	19	0
CE3	5	15	100	0	2	52	42	6	52	42	6	13	77	10	1
RP1	12	3	100	0	3	33	50	17	33	50	17	13	77	10	0
ATF1203	8	7	100	0	2	23	47	30	23	47	30	28	58	14	0
Crewcut	8	12	100	0	8	20	48	32	20	48	32	18	57	25	0
Rebel II	7	12	100	0	28	45	37	18	45	37	18	13	75	12	0
KY-31	8	10	100	0	32	18	52	30	18	52	30	2	77	21	1

■ Cultivar under evaluation
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

* <ATF1167>='Brockton' (BT:10/3/2008)

Table 4A 2006 Additional Morphological Measurements

Cultivar	Anthocyanin Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to the Touch % Smooth	Leaf Blade Margin Roughness to the Touch % Semi-Rough	Leaf Blade Margin Roughness to the Touch % Rough	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Rhizomes % Present	Lemma Hairs % Present	Palea Hairs % Present	Node Color % Distinct	Seed Weight (mg/1,000 seeds)	Growth Habit at Anthesis % Prostrate	Growth Habit at Anthesis % Semi-erect	Growth Habit at Anthesis % Erect
* ATF1167	0	23	49	28	97	97	0	68	100	13	2877	9	38	53
CE3	0	22	52	26	100	95	0	78	100	3	2187	3	17	80
RP1	0	23	55	22	95	98	0	82	100	3	1914	0	6	94
ATF1203	0	12	46	42	83	95	0	77	100	3	2903	4	34	62
Crewcut	0	15	53	32	100	100	0	65	100	15	2152	3	31	66
Rebel II	0	35	45	20	90	90	0	65	100	42	2434	15	34	51
KY-31	0	44	34	22	90	85	0	75	100	60	3104	23	39	38

* Cultivar under evaluation
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

Table 4B 2007 Additional Morphological Measurements

Cultivar	Anthocyanin Present in the Leaf Blade % Purple	Leaf Blade Margin Roughness to the Touch % Smooth	Leaf Blade Margin Roughness to the Touch % Semi-Rough	Leaf Blade Margin Roughness to the Touch % Rough	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Rhizomes % Present	Lemma Hairs % Present	Palea Hairs % Present	Node Color % Distinct	Seed Weight (mg/1,000 seeds)	Growth Habit at Anthesis % Prostrate	Growth Habit at Anthesis % Semi-erect	Growth Habit at Anthesis % Erect
ATF1167	0	65	27	8	95	100	0	88	100	2	2853	0	33	67
CE3	0	82	18	0	82	100	0	85	100	7	2177	0	23	77
RP1	0	62	32	6	87	100	0	92	100	0	1989	0	23	77
ATF1203	0	67	25	8	92	98	0	82	100	0	2948	0	23	77
Crewcut	0	53	37	10	97	98	0	82	100	2	2106	4	38	58
Rebel II	0	50	37	13	90	95	0	93	100	12	2498	2	48	50
KY-31	0	75	10	15	83	87	0	92	100	17	3092	2	55	43

* Cultivar under evaluation
Measurements taken in Albany, Oregon
3 reps; 20 plants/rep = 60 data points

* <ATF1167='Brockton' (BT: 10/3/2008)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
NexGen Turf Research, LLC	ATF1167	"Brockton" (Ltr: 10/3/08)
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
33725 Columbus St. S. E. Albany, OR 97322	(541) 967-8923	(541) 967-8223
	7. PVPO NUMBER	#200800081

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☑ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☑ **YES** ☐ **NO**

10. Is the applicant the original owner? ☑ **YES** ☐ **NO** **If no, please answer <u>one</u> of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
NexGen Turf Research, LLC	33725 Columbus St. SE, Albany, OR 97322 USA	ATF1167
		VARIETY NAME 'Brockton' (1st use 10/31/08)
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)***	FOR OFFICIAL USE ONLY
Kenneth Hignight	33725 Columbus St. SE, Albany, OR 97322 USA	PVPO NUMBER #200800081

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

Kenneth Hignight
Signature

1-17-08
Date